



Substance Abuse and Mental Health Services Administration DISASTER TECHNICAL ASSISTANCE CENTER

RESOURCE LIST

Substance Abuse and Trauma: Prevention and Treatment

Prepared by the Substance Abuse and Mental Health Services Administration (SAMHSA) Disaster Technical Assistance Center (DTAC), ESI, under contract with the Emergency Mental Health and Traumatic Stress Services Branch, Center for Mental Health Services, SAMHSA.

Peer-Reviewed Journal Articles

Back, S.E., Dansky, B.S., Carroll, K.M., Foa, E.B., and Brady, K.T. (2001). Exposure therapy in the treatment of PTSD among cocaine-dependent individuals: Description of procedures. *Journal of Substance Abuse Treatment*. 21(1):35-45.

The authors describe a psychotherapy treatment, the Concurrent Treatment of PTSD and Cocaine Dependence, for cocaine-dependent individuals with posttraumatic stress disorder diagnoses. In vivo and imaginal exposure therapy techniques are discussed.

Bollerud, K. (1990). A model for the treatment of trauma-related syndromes among chemically dependent inpatient women. *Journal of Substance Abuse Treatment*. 7(2):83-7.

This paper discusses an education and preliminary treatment program for chemically dependent women who are survivors of physical and sexual violence.

Boxer, P.A. and Wild, D. (1993). Psychological distress and alcohol use among firefighters. *Scandinavian Journal of Work, Environment and Health*. 19(2): 121-5.

This study investigates stressors experienced by firefighters. The toll of significant psychological distress leads to a higher probability of alcohol abuse.

Brady, K.T. (2001). Comorbid posttraumatic stress disorder and substance use disorders. *Psychiatric Annals*. 31(5):313-319.

The literature review surveys the theoretical issues, clinical studies, new developments, and outcomes of treatment for comorbid posttraumatic stress disorder and substance abuse disorders.

Brady, K.T., Dansky, B.S., Back, S.E., Foa, E.B., and Carroll, K.M. (2001). Exposure therapy in the treatment of PTSD among cocaine-dependent individuals: Preliminary findings. *Journal of Substance Abuse Treatment*. 21(1):47-54.

The article discusses the preliminary findings of a psychotherapy study to treat coexisting posttraumatic stress disorder (PTSD) and cocaine dependence. Results indicate that exposure psychotherapy may be used safely and effectively for individuals with concurrent PTSD and cocaine dependence.

Peer-Reviewed Journal Articles (continued)

Brady, K.T., Killeen, T.K., Brewerton, T., and Lucerini, S. (2000). Comorbidity of psychiatric disorders and posttraumatic stress disorder. *Journal of Clinical Psychiatry*. 61 Suppl (7):22-32.

Posttraumatic stress disorder (PTSD) often coexists with major depressive disorder, perhaps the result of the under-diagnosis of PTSD when trauma histories are unknown. In addition, trauma victims may self-medicate PTSD symptoms, leading to substance abuse disorders.

Bremner, J.D., Innis, R.B., Southwick, S.M., Staib, L., Zoghbi, S., and Charney, D.S. (2000). Decreased benzodiazepine receptor binding in prefrontal cortex in combat-related posttraumatic stress disorder. *American Journal of Psychiatry*. 157(7):1120-1126.

This study examines the central benzodiazepine receptor binding in patients with posttraumatic stress disorder to determine if humans, like animals, exhibit a decrease in frontal cortex activity when exposed to stress. The results reveal lower distribution volumes.

Breslau, N., Davis, G.C., and Schultz, L.R. (2003). Posttraumatic stress disorder and the incidence of nicotine, alcohol, and other drug disorders in persons who have experienced trauma. *Archives of General Psychiatry*. 60(3):289-94.

This study examines the relationship of exposure to trauma and an increased risk for nicotine, alcohol, or drug use, independent of posttraumatic stress disorder (PTSD). The researchers found that exposure to trauma neither increased nor decreased the risk for chemical abuse, however, PTSD may be a risk factor.

Brown, P.J., Stout, R.L., and Gannon-Rowley, J. (1998). Substance use disorder-PTSD comorbidity. Patients' perceptions of symptom interplay and treatment issues. *Journal of Substance Abuse Treatment*. 15(5):445-8.

Forty-two patients with posttraumatic stress disorder and substance use disorder are interviewed regarding the coexistence of the disorders and the most effective treatments. The paper includes discussions about treatments, treatment deterrents, and referral criteria.

Brown, P.J. and Stout, R.L. (1996). Posttraumatic stress disorder and substance abuse relapse among women: A pilot study. *Psychology of Addictive Behaviors*. 10(2):124-28.

This study compares substance-dependent women with and without posttraumatic stress disorder (PTSD) concerning their substance abuse after inpatient treatment. The study found that although the rate of relapse did not significantly differ between the two groups, women with PTSD relapsed more quickly than those without it.

Brown, P.J., Recupero, P.R., and Stout, R. (1995). PTSD substance abuse comorbidity and treatment utilization. *Addictive Behaviors*. 20(2):251-4.

In this study, approximately 25 percent of patients admitted for detoxification at a private hospital were found to have significant posttraumatic stress disorder symptomatology.

Peer-Reviewed Journal Articles (continued)

Brown, P.J. and Wolfe, J. (1994). Substance abuse and post-traumatic stress disorder comorbidity. *Drug and Alcohol Dependence*. 35(1):51-9.

This is a literature review examining those with substance abuse issues with and without posttraumatic stress disorder (PTSD), identifying areas lacking in research regarding the impact of PTSD on substance abuse treatment.

Brown, V.B., Melchior, L.A., Reback, C., and Huba, G.J. (1994). Psychological functioning and substance abuse before and after the 1992 Los Angeles riot in a community sample of women. *Journal of Psychoactive Drugs*. 26(4):431-7.

This paper assesses a community study, before and after the 1992 Los Angeles riots, reporting a lack of social supports, an environment of high distress, and a shortage of social support from counselors following the riots.

Cardenas, J., Williams, K., Wilson, J.P., Fanouraki, G., and Singh A. (2003). PTSD, major depressive symptoms, and substance abuse following September 11, 2001, in a midwestern university population. *International Journal of Emergency Mental Health*. 5(1):15-28.

This report on Cleveland State University assesses the prevalence of posttraumatic stress disorder (PTSD), major depressive disorder, and substance abuse on the Cleveland State University campus following September 11. Several characteristics increase the risk for PTSD, including relationship to active duty personnel, gender, level of education, and prior history of mental health problems.

Chilcoat, H.D., and Breslau, N. (1998). Posttraumatic stress disorder and drug disorders. *Archives of General Psychiatry*. 55:913-917.

This study investigates the causal relationships between posttraumatic stress disorder (PTSD), exposure to trauma, and drug use. Findings indicate that drugs may be used to self-medicate PTSD symptoms.

Coffey, S.F., Saladin, M.E., Drobles, D.J., Brady, K.T., Dansky, B.S., and Kilpatrick, D.G. (2002). Trauma and substance cue reactivity in individuals with comorbid posttraumatic stress disorder and cocaine or alcohol dependence. *Drug and Alcohol Dependence*. 65(2):115-27.

Within the context of comorbid posttraumatic stress disorder and substance-abusing dependent individuals, this study assesses the impact of cue reactivity and indicates an increase of substance craving in response to trauma memories.

Deren, S., Shedlin, M., Hamilton, T., and Hagan, H. (2002). Impact of the September 11th attacks in New York City on drug users: A preliminary assessment. *Journal of Urban Health*. 79(3):409-12.

The article surveys the habit changes of drug users in New York City following September 11. Among a wide range of responses, researchers found that drug users perceived an increase in drug use and a greater demand for drug treatment.

Peer-Reviewed Journal Articles (continued)

Deykin, E.Y., and Buka, S.L. (1997). Prevalence and risk factors for posttraumatic stress disorder among chemically dependent adolescents. *American Journal of Psychiatry*. 154(6):752-757.

This study of substance dependent adolescents, age 15-19, indicates that posttraumatic stress disorder (PTSD) rates within this population are five times higher than previously reported, and female adolescents experience higher PTSD rates due to a greater risk of rape than their male counterparts.

Factor, S.H., Wu, Y., Monserrate, J., Edwards, V., Cuevas, Y., Del Vecchio, S., and Vlahov, D. (2002). Drug use frequency among street-recruited heroin and cocaine users in Harlem and the Bronx before and after September 11, 2001. *Journal of Urban Health*. 79(3):404-8.

This study examines drug use frequency among Harlem and Bronx drug users before and after September 11, reporting that drug use neither increased nor decreased.

Galea, S., Ahern, J., Resnick, H., Kilpatrick, D., Bucuvalas, M., Gold, J., and Vlahov, D. (2002). Psychological sequelae of the September 11 terrorist attacks in New York City. *New England Journal of Medicine*. 346(13):982-987.

This study employed random-digit dialing of adults living near the World Trade Center attacks to assess the prevalence of posttraumatic stress disorder (PTSD) and depression in the population. Predictors and measures of severity of PTSD primarily are exposure to the attacks and loss of a loved one.

Jacobson, L.K., Southwick, S.M., and Kosten, T.R. (2001). Substance use disorders in patients with posttraumatic stress disorder: a review of the literature. *American Journal of Psychiatry*. 158(8):1184-1190.

This is a literature review of studies regarding the epidemiology, clinical methods, and functional pathways of comorbid posttraumatic stress disorder and substance abuse. Results indicate the importance of the development of programs specifically for comorbid patients, and highlights clinical neurobiological research.

Kessler, R.C., Sonnega, A., Bromet, E., Hughes, M., and Nelson, C.B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*. 52:1048-1060.

The National Comorbidity Survey results indicate that posttraumatic stress disorder (PTSD) is more prevalent and persistent within the national population, and the survey supports more research to determine age of onset, severity, and probability of PTSD for different types of trauma.

Kilpatrick, D.G., Ruggiero, K.J., Acierno, R., Saunders, B.E., Resnick, H.S., and Best, C.L. (2003). Violence and risk of PTSD, major depression, substance abuse/dependence, and comorbidity: Results from the national survey of adolescents. *Journal of Consulting and Clinical Psychology*. 71(4):692-700.

A national household telephone survey of adolescents collected data concerning the prevalence, coexistence, and risk-factor data for posttraumatic stress disorder, depression, and substance abuse/dependence. The results indicate that the risk for all of these increased with exposure to interpersonal violence.

Peer-Reviewed Journal Articles (continued)

Kozaric-Kovacic, D., Ljubin, T., and Grappe, M. (2000). Comorbidity of posttraumatic stress disorder and alcohol dependence in displaced persons. *Croatian Medical Journal.* 41(2):173-8.

A group of 368 displaced men and women were interviewed using DSM-III-R criteria, Watson's PTSD Questionnaire, and the CAGE Questionnaire. Research indicates that the number of war traumas witnessed affected the presence and severity of posttraumatic stress disorder.

Machell, D.F. (1993). Combat post-traumatic stress disorder, alcoholism, and the police officer. *Journal of Alcohol and Drug Education.* 38(2):23-32.

The author discusses the psychological profile of the police officer with alcoholism and suffering from posttraumatic stress disorder. Symptoms and treatments are included, and the suppression of feelings through alcohol abuse is analyzed.

Maes, M., Delmeire, L., Mylle, J., and Altamuara, C. (2001). Risk and preventive factors of post-traumatic stress disorder (PTSD): Alcohol consumption and intoxication prior to a traumatic event diminishes the relative risk to develop PTSD in response to that trauma. *Journal of Affective Disorders.* 63(1-3): 113-121.

Utilizing the Composite International Diagnostic Interview (CIDI), researchers studied 127 victims who had been trapped in a ballroom fire to study risk factors and preventive strategies for posttraumatic stress disorder (PTSD). Results suggest that PTSD can be prevented by the effects of peri-traumatic factors, such as a sense of control or alcohol intoxication.

McFarlane, A.C. (1998). Epidemiological evidence about the relationship between PTSD and alcohol abuse: The nature of the association. *Addictive Behaviors.* 23(6):813-25.

Employing the Bradford Hill criteria, this study assesses the relationship between posttraumatic stress disorder and alcohol abuse. Results suggest a causal relationship emphasizing the importance of public health involvement.

McKearn, J. (1988). Post-traumatic stress disorder: Implications for the treatment of family members of alcoholics. *Alcoholism Treatment Quarterly.* 5(1-2):141-44.

This is a personal narrative regarding the author's experiences as a family member of an alcoholic. The author discusses the effect of posttraumatic stress disorder on alcoholism treatments.

Najavits, L.M. Description of a new psychotherapy, "Seeking Safety," for PTSD and substance abuse. In Ouimette, P., Brown, P. (Eds.), *Posttraumatic Stress Disorder and Substance Use Disorder.* In press.

This chapter gives an in-depth description of the Seeking Safety program, including its development, treatment strategies, a review of research, and future direction. This cognitive-behavioral therapy has become the building block in research for the treatment of comorbidity in posttraumatic stress disorder and substance abuse.

Peer-Reviewed Journal Articles (continued)

North, C.S., Tivis, L., McMillen, J.C., Pfefferbaum, B., Spitznagel, E.L., Cox, J., Nixon, S., Bunch, K.P., and Smith, E.M. (2002). Psychiatric disorders in rescue workers after the Oklahoma City bombing. *American Journal of Psychiatry*. 159(5):857-9.

This is a study of psychiatric disorders in both volunteer fire personnel and primary victims of the Oklahoma City bombing. Results indicate that posttraumatic stress disorder was more common among the victims, and that high rates of alcohol abuse were prevalent among the fire personnel before the disaster and remain unchanged through the trauma and its aftermath. The researchers suggest that the resiliency seen in firefighters may be related to their training, preparedness, and post-disaster mental health interventions.

Op Den Velde, W., Aarts, P.G., Falger, P.R., Hovens, J.E., Van Duijn, H., De Groen, J.H., and Van Duijn, M.A. (2002). Alcohol use, cigarette consumption and chronic post-traumatic stress disorder. *Alcohol and Alcoholism*. 37(4):355-61.

A study of 147 male veterans of the Nazi occupation resistance in Holland during World War II determined no correlation between alcohol consumption and posttraumatic stress disorder. The authors hypothesize that substance abuse in trauma survivors is associated with peri-traumatic patterns of coping.

Ouimette, P.C., Moos, R.H., and Finney, J.W. (2003). PTSD treatment and 5-year remission among patients with substance use and posttraumatic stress disorders. *Journal of Consulting and Clinical Psychology*. 71(2):410-4.

This study evaluated 100 male substance abuse and posttraumatic stress disorder (SUD-PTSD) patients who attended SUD treatment with one, two, and five-year follow-ups. Results suggest that those patients who attended treatment for a longer duration in year one were more likely to be re-admitted into a treatment program in year five. The researchers advise treating the comorbid disorders simultaneously.

Ouimette, P.C., Moos, R.H., and Finney, J.W. (2000). Two-year mental health service use and course of remission in patients with substance use and posttraumatic stress disorders. *Journal of Studies on Alcohol*. 61(2): 247-53.

This study assesses the association between outpatient posttraumatic stress disorder (PTSD) treatment and the long-term treatment of comorbid PTSD and substance abuse patients. The findings indicate that patients who attend more outpatient sessions with self-help group participation are more likely to sustain remission.

Pfefferbaum, B., Vinekar, S.S., Trautman, R.P., Lensgraf, S.J., Reddy, C., Patel, N., and Ford, A.L. (2002). The effect of loss and trauma on substance use behavior in individuals seeking support services after the 1995 Oklahoma City bombing. *Annals of Clinical Psychiatry*. 14(2):89-95.

The authors studied the effects of trauma exposure on alcohol and substance abuse behaviors following the 1995 Oklahoma City bombing. This study indicated that no causal relationship was found; however, a relationship exists between posttraumatic stress and increased substance abuse behaviors in disaster victims.

Peer-Reviewed Journal Articles (continued)

Polles, A.G. and Smith, P.O. (1995). Treatment of coexisting substance dependence and posttraumatic stress disorder. *Psychiatric Services*. 46(7): 729-30.

The authors detail the clinical treatment of a physician who developed posttraumatic stress disorder and an alcohol and opioid dependence after he was shot and held hostage by a patient. The inpatient treatment combined behavioral therapy and pharmacological methods with successful results.

Reijneveld, S.A., Crone, M.R., Verhulst, F.C., and Verloove-Vanhorick, S.P. (2003). The effect of a severe disaster on the mental health of adolescents: A controlled study. *Lancet*. 362(9385):691-6.

This study examines the effects of a major disaster on the substance abuse of adolescents. Using data gathered from students in Volendam, Netherlands, prior to and five months following a major café fire, findings revealed that alcohol use increased for the adolescents affected by the fire, but marijuana usage and cigarette smoking did not.

Saxon, A.J., Davis, T.M., Sloan, K.L., McKnight, K.M., McFall, M.E., and Kivlahan, D.R. (2001). Trauma, symptoms of posttraumatic stress disorder, and associated problems among incarcerated veterans. *Psychiatric Services*. 52(7):959-964.

This study reports the coexistence of posttraumatic stress disorder and substance abuse disorders in incarcerated veterans, and encourages the development of comorbid treatment.

Steindl, S.R., Young, R.M., Creamer, M., and Crompton, D. (2003). Hazardous alcohol use and treatment outcome in male combat veterans with posttraumatic stress disorder. *Journal of Traumatic Stress*. 16(1):27-34.

This study assesses the relationship between alcohol dependence and posttraumatic stress disorder (PTSD), specifically among combat veterans, by monitoring PTSD symptoms before, during, and following group cognitive-behavioral treatment. PTSD arousal symptoms separated the low-risk and hazardous drinkers at follow-up, illustrating a comorbid relationship.

Stewart, S., Conrod, P.J., Samoluk, S.B., Pihl, R.O., and Dongier, M. (2000). Posttraumatic stress disorder symptoms and situation-specific drinking in women substance abusers. *Alcoholism Treatment Quarterly*. 18(3):31-47.

Researchers studied the relationship of posttraumatic stress disorder (PTSD) and alcohol abuse among female substance abusers, determining that PTSD symptoms are significantly correlated with the frequency of heavy drinking related to negative situations.

Stewart, S., Pihl, R.O., Conrod, P.J., and Dongier, M. (1998). Functional associations among trauma, PTSD, and substance-related disorders. *Addictive Behaviors*. 23(6):797-812.

This review discusses research explaining potential functional pathways between posttraumatic stress disorder and substance abuse. Optimal treatment programs are discussed.

Peer-Reviewed Journal Articles (continued)

Stewart, S.H. (1996). Alcohol abuse in individuals exposed to trauma: A critical review. *Psychological Bulletin*. 120(1):83-112.

This article discusses the relationship between posttraumatic stress disorder, exposure to trauma, and alcohol abuse, as well as the popular theories and risk factors regarding this relationship. The author applies these findings to assessment and treatment and offers guidelines on future research.

Vlahov, D., Galea, S., Resnick, H., Ahern, J., Boscarino, J.A., Bucuvalas, M., Gold, J., and Kilpatrick, D. (2002). Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York, residents after the September 11th terrorist attacks. *American Journal of Epidemiology*. 155(11):988-96.

Following the September 11 attacks in Manhattan, a random-digit dial telephone survey suggested a substantial increase in cigarette smoking, alcohol consumption, and marijuana use in the five to eight weeks following the disaster. Depression was more common among those who increased substance abuse, suggesting that comorbid psychiatric conditions may increase substance use.

Volpicelli, J., Balaraman, G., Hahn, J., Wallace, H., and Bux, D. (1999). The role of uncontrollable trauma in the development of PTSD and alcohol addiction. *Alcohol Research and Health*. 23(4): 256-262.

Endorphin withdrawal following a traumatic event may cause emotional distress and posttraumatic stress disorder (PTSD), leading to alcohol consumption to numb the pain. This article discusses the resulting difficulties of PTSD and alcoholism treatments.

Weiss, L., Fabri, A., McCoy, K., Coffin, P., Netherland, J., and Finkelstein, R. (2002). A vulnerable population in a time of crisis: Drug users and the attacks on the World Trade Center. *Journal of Urban Health*. 79(3):392-403.

This study assessed current and former heroin and cocaine users' habits to monitor their drug use after September 11. Reductions in drug use were as common as increases, and the study discusses how a wide variety of factors may play a role.

Wilcox, J.A., Briones, D.F., and Suess, L. (1991). Substance abuse, post-traumatic stress, and ethnicity. *Journal of Psychoactive Drugs*. 23(1):83-4.

This article reports the prevalence of substance abuse within the population of combat veterans with posttraumatic stress disorder, with regard to ethnicity and age. The study indicated that length of exposure, age, and ethnicity of the individual do not affect the rate of substance abuse within this population.

Zweben, J.E., Clark, H.W., and Smith, D.E. (1994). Traumatic experiences and substance abuse: Mapping the territory. *Journal of Psychoactive Drugs*. 26(4):327-44.

The authors summarize the relationships between types of trauma, addictive behaviors, and the integration of posttraumatic stress disorder into effective treatments to determine a recovery-oriented therapy model. The article also serves to educate mental health practitioners in treating these disorders within the addiction treatment field.

Peer-Reviewed Journal Articles (continued)

Zywiak, W.H., Stout, R.L., Trefry, W.B., LaGrutta, J.E., Lawson, C.C., Khan, N., Swift, R.M., and Schneider, R.J. (2003). Alcohol relapses associated with September 11, 2001: A case report. *Substance Abuse*. 24(2):123-8.

This study assessed alcohol use among patients enrolled in treatment prior to September 11, and results indicate higher usage of alcohol after September 11. The author recommends education and outreach.

SAMHSA and Other Publications

Substance Abuse and Mental Health Services Administration (SAMHSA)

Office of Applied Studies

Overview of Findings from the 2002 National Survey on Drug Use and Health

Community Anti-Drug Coalition (CADCA)

Stress and Substance Abuse: Implications of September 11 Events

The National Center on Addiction and Substance Abuse at Columbia University

2003 National Survey of American Attitudes on Substance Abuse VIII

The National Center on Addiction and Substance Abuse at Columbia University

13 States, 4 Major Cities See Increased Demand for Drug and Alcohol Treatment Since 9-11

National Center for Post-Traumatic Stress Disorder

Department of Veterans Affairs

Disasters and Substance Abuse or Dependence: Fact Sheet

National Institute on Drug Abuse

NIDA Community Drug Alert Bulletin: Stress and Substance Abuse

National Institute on Drug Abuse

Depression, PTSD, Substance Abuse Increase in Wake of September 11 Attacks